

Work Order ID 138519

138519

Page 1

Friday, October 30, 2015 9:06:53 AM

Item ID: D212-664-101TRN Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Crosstube Turning Detail

Start Date: 10/30/2015 Start Qty: 1.00 *1* Cust Item ID:

Required Date: 10/30/2015 Req'd Qty: 1.00 *1* Customer:

Reference:

Approvals: Process Plan: ML3 Date: OCT 30 2015 Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D212-664-141	E

100

0.00

100

MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.02

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113

2-Turn first side as per Folio FA113

3-Blend transition lines only, **do not sand whole tube**:

FOLIO REV: AA

DWG REV: E

*Use mill bastard file, brush file repeatedly with file card.

*Do not use sandpaper coarser than 320 grit.

1 Ø
mm L
15/11/03

110

QC1- Inspection performed by CMM

0.00

110

QC

Memo

0.00

Quality Control

1 Ø
mm L
15/11/03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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Friday, October 30, 2015 9:06:53 AM

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Page 2

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Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crosstube Turning Detail

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Cust Item ID:

Required Date: 10/30/2015 Req'd Qty: 1.00

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120

0.00

120

MORI SEIKI CNC LATHE LARGE

0.03

Mori Seiki

Memo

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA113

2-Blend transition lines only, **do not sand whole tube**:

*Use mill bastard file, brush file repeatedly with file card.

*Do not use sandpaper coarser than 320 grit.

FOLIO REV: M DWG REV: E

3-Remove sand and plugs

1 ϕ _____
ampl
15/11/05

130

QC1- Inspection performed by CMM

0.00

130

QC

Memo

Quality Control

+ PERFORM ULTRA SONIC MEASUREMENT

1 ϕ _____
ampl
15/11/05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Work Order ID 138519

Friday, October 30, 2015 9:06:53 AM

138519

Page 3

Item ID: D212-664-101TRN

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crosstube Turning Detail

Start Date: 10/30/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 10/30/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC8- Inspect parts - second check	0.00				1	8		DAS 47 9-89

140

QC

Quality Control

Memo

+ CHECK ULTRA SONIC MEASUREMENT AND ORIENTATION FOR
BENDING

15-11-09

145

0.00

145

Crosstubes

Crosstubes

Memo

GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.

TW 15-11-16

150

0.00

150

HandFXtube

Hand Finishing Crosstubes

Memo

1- PRESSURE WASH X-TUBE INSIDE AND OUT

2- ALODINE AND ACID ETCH X-TUBE INSIDE AND OUT. USE RED
SCOTCH BRITE

TW 15-11-19

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER : ☐				

Work Order ID 138519

138519

Page 4

Friday, October 30, 2015 9:06:53 AM

Item ID: D212-664-101TRN

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Crosstube Turning Detail

Start Date: 10/30/2015 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 10/30/2015 Req'd Qty: 1.00 *1*

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC7-Inspect Chemical Conversion Coat	0.00							DAS 38 9-88
160						1			15-11-20
QC	Memo	0.00							
Quality Control									
170	Packaging	0.00							
170									
Packaging	Memo	0.00							
Packaging	LOCATION : LG014								
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

MLJ 15-11-20

MLJ NOV 20 2015

SA 20151120

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER :			
Misidentified ☐	☐	Past Due ☐	☐				

Picklist Print

Friday, October 30, 2015 9:06:56 AM

Page 1

Work Order ID: 138519

138519

Parent Item: D212-664-101TRN

D212-664-101TRN

Parent Item Name: Crosstube Turning Detail

Start Date: 10/30/2015

Required Date: 10/30/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec
IPP Rev B 08.04.02 removed Polish EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128		Manufactured	No			120	Each	71.0000	1	1			

D6005-128

Crosstube Material

Location

Loc Qty

Loc Code

HALL

24

123963

24

LG003

47

107872

25

75642

22

mark 15/11/02

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Root Cause				FAULT CATEGORY																																																																																																																											
Environment	☐	Design	☐	Doc/Data	☐	Equip/Tooling	☐	Handling/Pre	☐	Material	☐	Internal Transport	☐	Tribal Knowledge	☐	LOA	☐	Substation	☐	Past Expiry Date	☐	Misidentified	☐	No Re-verification	☐	Operator	☐	Offset/Setup	☐	Supplier	☐	Training	☐	Use for Testing	☐	Poor Information	☐	Rushing	☐	Product Improvement	☐	Process Improvement	☐	Manufacturing Process	☐	Past Due	☐	Pressure/Forced	☐	Bending	☐	Centre Not Concentric	☐	Cracks	☐	Crimp/Kink/Ripple/Wave	☐	Cuffs	☐	Crushing	☐	Heat Treat	☐	Wave/Twist in Tube	☐	Marks/Chatter	☐	Temperature/Cure	☐	Set-up	☐	BOM/Route	☐	Broken/Damage/Defect	☐	Inspection Incomplete/Unqualified	☐	Contamination	☐	Countersink	☐	Cut Too Short	☐	Instructions Incomplete/Unclear	☐	Drill Holes	☐	Power Loss/Surge	☐	Folio/Program	☐	Grain	☐	Weld	☐	Wrong Stock Pulled	☐	Out of Sequence	☐	Off-set	☐	Mislabeled	☐	Fit/Function	☐	Misaligned/off center	☐	Positioned Wrong	☐	Outside Dimensions	☐	Over/Under tolerance	☐	Part Incorrect	☐	Part Lost/Missing	☐	Part Moved	☐	Drawing	☐	Finish	☐	Misread	☐	Turning Sequence	☐
OTHER : _____																																																																																																																															

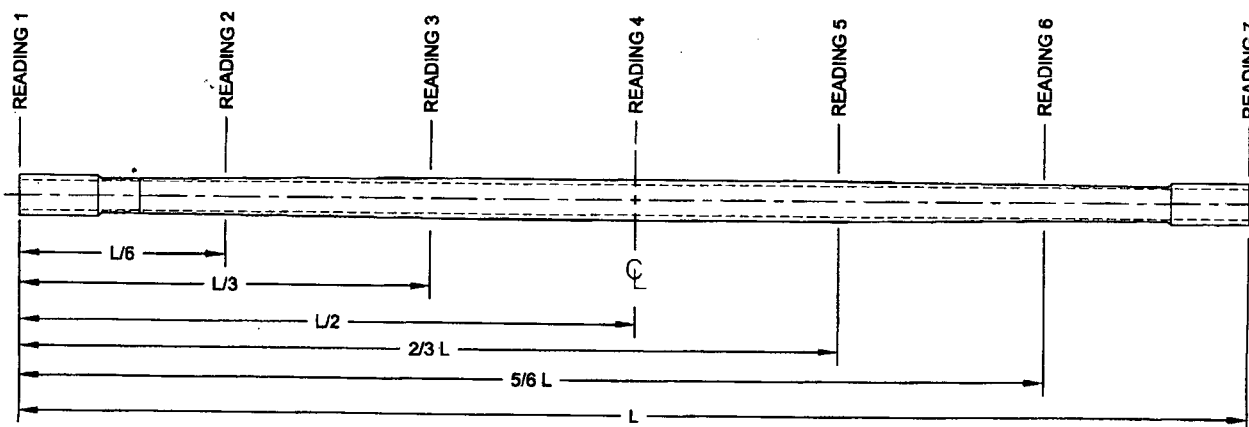
DART AEROSPACE LTD		Work Order:	138519
Description: Crosstube Assembly (205/212/412 High Fwd)		Part Number:	D212-664-141
Inspection Dwg: D212-664-141 Rev: E		Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010	.200	/		vern	CNC-08
	R0.063	+/-0.010	.063	-		RG	
	2.740	+0.005/-0.000	2.740	-		vern	CNC-08
	5.097	+/-0.030	5.100	/			
	2.304	+0.005/-0.000	2.306	/			
	2.340	+0.005/-0.000	2.344	/			
	2.398	+0.005/-0.000	2.463	/			
	2.448	+0.005/-0.000	2.452	/			
	2.498	+0.005/-0.000	2.500	/			
	2.549	+0.005/-0.000	2.553	/			
	2.599	+0.005/-0.000	2.603	/			
	2.671	+0.005/-0.000	2.673	-			
	2.701	+0.005/-0.000	2.704	/			
SIDE B	0.200	+/-0.010	.200	/		vern	CNC-08
	R0.063	+/-0.010	.063	/		RG	
	2.740	+0.005/-0.000	2.740	/		vern	CNC-08
	5.097	+/-0.030	5.100	/			
	2.304	+0.005/-0.000	2.307	/			
	2.340	+0.005/-0.000	2.345	/			
	2.398	+0.005/-0.000	2.463	/			
	2.448	+0.005/-0.000	2.453	/			
	2.498	+0.005/-0.000	2.501	/			
	2.549	+0.005/-0.000	2.553	/			
	2.599	+0.005/-0.000	2.603	/			
	2.671	+0.005/-0.000	2.673	/			
	2.701	+0.005/-0.000	2.704	/			
	126.514	+/-0.020	126.514	/		tape	LG-11

DART AEROSPACE LTD	Work Order:	138519
Description: Crosstube Assembly (205/212/412 High Fwd)	Part Number:	D212-664-141
Inspection Dwg: D212-664-141 Rev: E		Page 2 of 2

WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation Δw (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L = 0"	.376	.387	.382	.370	.017	0.048"
READING 2 L = 21	.241	.248	.243	.234	.014	
READING 3 L = 42	.350	.363	.356	.346	.017	
READING 4 L = 63	.378	.387	.381	.375	.012	
READING 5 L = 84	.350	.363	.363	.351	.013	
READING 6 L = 105	.243	.254	.247	.233	.021	
READING 7 L = 126	.373	.381	.385	.376	.012	

Calibration Result

Actual Block Thickness: .600 - .750

SITESCAN 250 Measured Thickness: .600 - .750

DAS
47

Measured by:	<i>mmp</i>
Date:	15/11/05

Audited by:	9-89
Date:	15-11-09

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
C	07.05.28	Dwg Rev updated (P/O D412-664-101)	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ	
E	12.06.04	Wall thickness form added	KJ	
F	14.06.05	Dwg Rev updated	KJ	<i>[Signature]</i>

Item	Qty -141	Qty -141B	Qty -141F	Part Number	Description
1	X			D212-664-141	CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD)
2		X		D212-664-141B	CROSSTUBE ASSEMBLY (214 HIGH FWD)
3			X	D212-664-141F	CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD) (ANODIZED)
4	1	1	1	D6005-128	CROSSTUBE
5	2		2	D2893-1	SUPPORT
6	4	4	4	D3595-063-450	RUBBER CUSHION
7		2		D5017-1	SUPPORT
8	4	4	4	MS21920-25	CLAMP (OR MS21920-26)
9	A/R	A/R	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6005-128
FINISHED LENGTH = 126.514±0.020
 - 2) FINISH -141 & -141B: a) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
b) PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
c) MASK UNDERSIDE OF CROSSTUBE AS SHOWN (ZN C6-2 / C6-3, HATCHED AREA)
d) PAINT OUTSIDE PER DART QSI 005 4.2
e) REMOVE MASKING AND APPLY MATTE CLEAR COAT
 - FINISH -141F: a) ANODIZE PER MIL-A-8625, TYPE II, CLASS 1.
b) ALODINE (DO NOT ETCH) PER QSI 005 4.1.2
c) PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
d) MASK UNDERSIDE OF CROSSTUBE AS SHOWN (ZN C6-2 / C6-3, HATCHED AREA)
e) PAINT OUTSIDE PER DART QSI 005 4.2
f) REMOVE MASKING AND APPLY MATTE CLEAR COAT
- *NOTE:** BETWEEN FINISHING OPERATIONS EXTREME CARE MUST BE TAKEN NOT TO CONTAMINATE OR DAMAGE FINISHED SURFACES.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
 - 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS
 - 7) WEIGHT: D212-664-141/-141B/-141F = 33.6 lbs
 - 8) PART IS SYMMETRIC ABOUT CENTERLINE.
 - 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

MACHINING

- 10) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.

BENDING

- 11) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 7.2% (BASED ON O.D.) IN LOWER HALF OF R35.5 BEND AND 6% (BASED ON O.D.) ON REMAINING TUBE.
- 12) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.

ASSEMBLY

- 13) TO INSTALL D2893-1 / D5017-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 14) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE ON TOP SIDE OF CROSSTUBE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

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1570-30

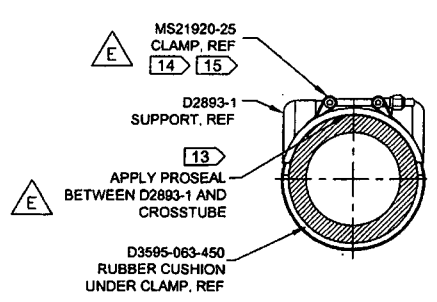
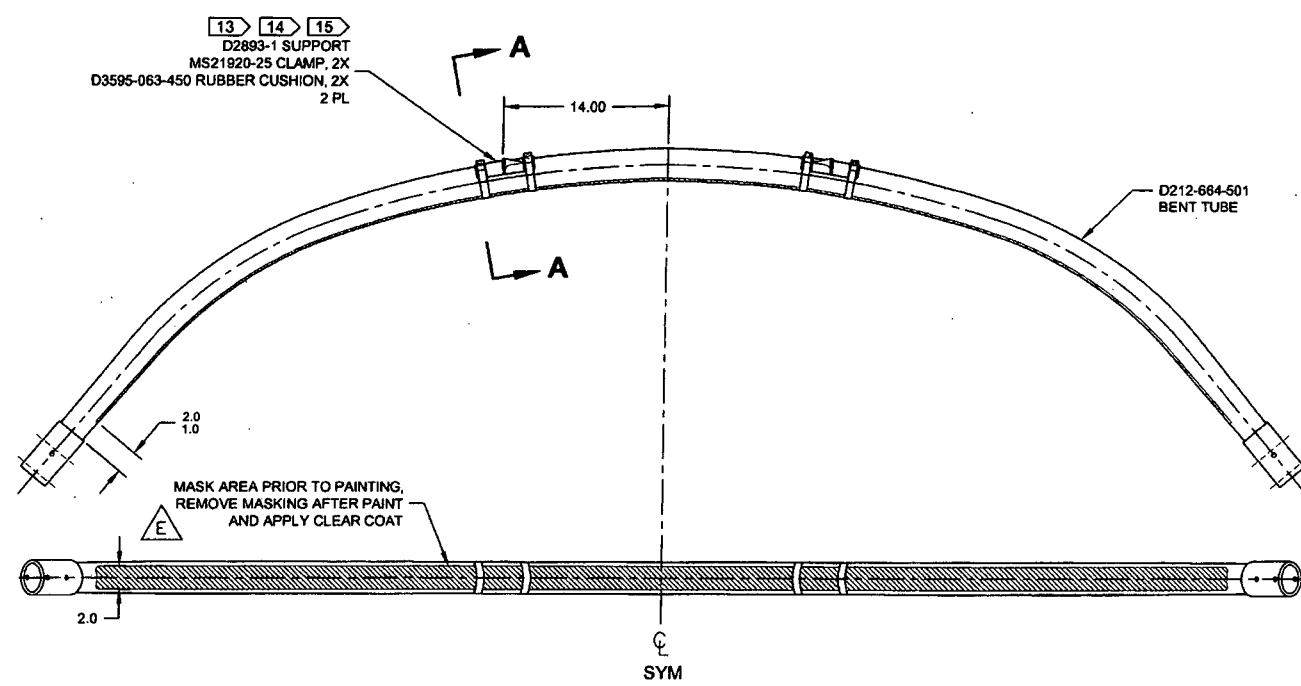
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2014-05-26
WJD

E	ADD -141F, D5017-1 WAS D2893-1 (-141B), PROSEAL WAS MAGNOBOND, NOTE 2: ADD INSPECTION WINDOW, NOTE 11: ALLOW 7.2% CRUSH, NOTE 15: ADD 72HR CURE AND RETORQUE FOR PROSEAL, ADD SHEET 3, CLAMPS REVERSED TO PREVENT CHAFING (B7-2, B7-3), BEND HEIGHT TOL. NOW 0.25 WAS 0.13 (C1-3), INCORP. DEO D-1/-2/-3	CP	14.04.01
D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -141B (ZN B4-2, D4-2); REMOVED REF & ADD TOLERANCES (ZN B4-3, C6-3, C8-3 & B6-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6386, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	CP	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	JP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	JP		
CHECKED	DW	DRAWING NO.	REV. E
MFG. APPR.	JP	D212-664-141	SHEET 1 OF 5
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	XTUBE ASSY (205/212/412 HI FWD)	NTS
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SECTION A-A
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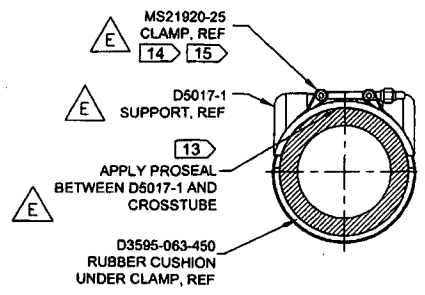
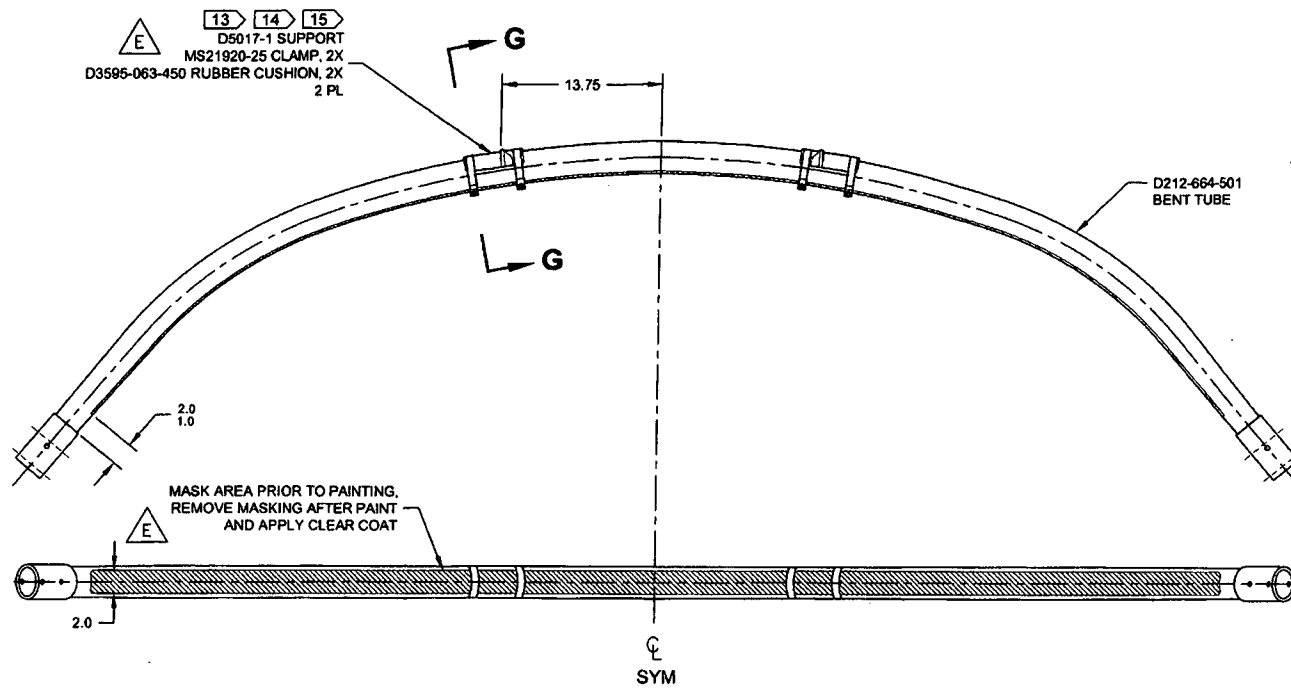
D212-664-141/-141F
ASSEMBLY DETAIL

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2014-05-26
AND

DESIGN	PP	DART AEROSPACE LTD	
DRAWN	PP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SW	DRAWING NO.	REV. E
MFG. APPR.	SW	D212-664-141	SHEET 2 OF 5
APPROVED	SW	TITLE	SCALE
DE APPR.	SW	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
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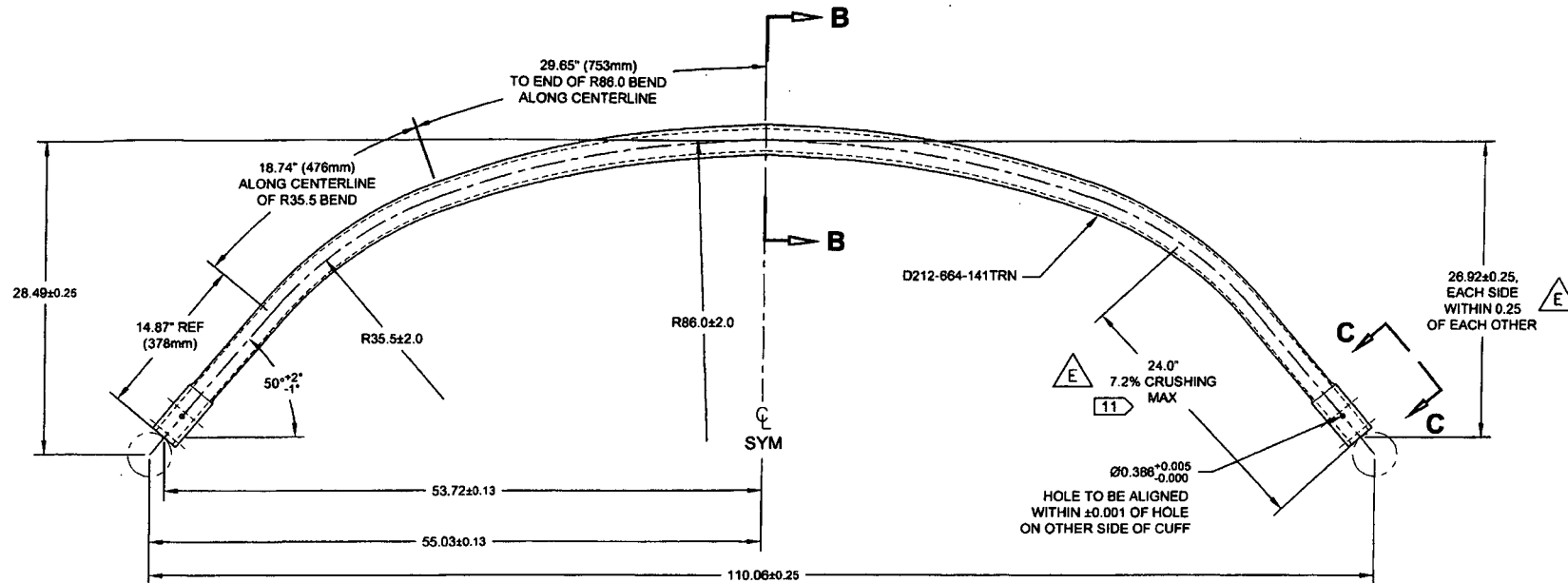
SECTION G-G
SCALE 4X

D212-664-141B
ASSEMBLY DETAIL

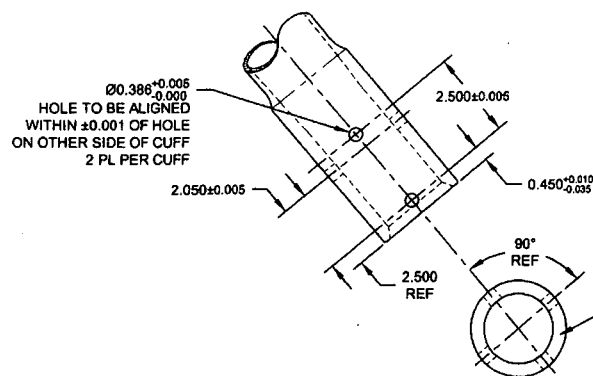
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MFG. APPR.	W	D212-664-141	SHEET 3 OF 5
APPROVED	W	TITLE	SCALE
DE APPR.	W	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
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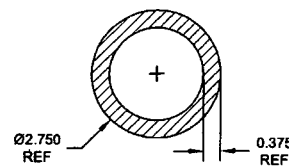
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D212-664-501
BENDING AND DRILLING DETAIL 11



VIEW C-C: CUFF DETAIL
 SCALE 3X



SECTION B-B
 SCALE 4X

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